

CLAIMS

What is claimed is:

1. An oil separator for a compressor, comprising:
 - a wall with an inner surface, the inner surface defining an inner chamber with a separator region and an oil accumulation region, the separator region having an impingement surface;
 - a mixture inlet that provides a passageway for an oil gaseous refrigerant mixture to flow from the exterior of the separator into the inner chamber of the separator;
 - a gas outlet that provides a passageway for the gaseous refrigerant from the separator region to the exterior of the separator; and
 - an oil outlet that provides a passageway for separated oil from the accumulation region to the exterior of the separator,the oil being separated from the oil gaseous refrigerant mixture as the mixture impinges against the impingement surface, the separated oil draining into the accumulation region from where the oil exits the separator through the oil outlet.
2. The separator of claim 1, wherein the mixture inlet, the gas outlet, and the oil outlet are apertures in the wall.

3. The separator of claim 1, wherein the mixture inlet, the gas outlet, and the oil outlet are tubular structures that traverse the wall from the exterior of the separator to the inner chamber.

4. The separator of claim 3, wherein the longitudinal axes of the gas outlet and the oil outlet are substantially parallel, and the longitudinal axis of the mixture inlet is substantially perpendicular to the axes of the gas and oil outlets.

5. The separator of claim 1, wherein the impingement surface has a substantially hemispherical shape.

6. The separator of claim 1, wherein the accumulation region is positioned to the side of the separator region, the juncture between the accumulation region and the separator region defining an entrance to the accumulation region, the accumulation having a terminal end sloped relative to the entrance so that the separated oil flows from the entrance towards the terminal end.

7. A compressor comprising:

a housing with at least one cylinder bore, the cylinder bore being provided with a suction inlet and a compression outlet;

a front head covering a first end of the housing;

a rear head covering a second end of the housing;

an oil separator formed in the rear head, the oil separator including an oil gaseous refrigerant mixture inlet that communicates with the compression outlet, a gas outlet, an oil outlet, and an oil accumulator in which separated oil accumulates, a portion of the separator having a substantially hemispherical shape chamber in which oil is separated from the refrigerant as the mixture impinges against a surface of the chamber, the separated oil accumulating in the accumulator and exiting the separator through the oil outlet, and the refrigerant exiting the compressor through the gas outlet.